



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/741,046	12/21/2000	Hiroshi Oohigashi	0229-0631P	5516

7590

07/31/2003

BIRCH, STEWART, KOLASCH & BIRCH, LLP  
P.O. Box 747  
Falls Church, VA 22040-0747

EXAMINER

MAKI, STEVEN D

ART UNIT

PAPER NUMBER

1733

9

DATE MAILED: 07/31/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action**

Application N . 09/741,046		Applicant(s) OOHIGASHI, HIROSHI	
Examiner Steven D. Maki		Art Unit 1733	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 15 July 2003 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

**PERIOD FOR REPLY [check either a) or b)]**

- a) ☐ The period for reply expires \_\_\_\_\_ months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.
- ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☒ A Notice of Appeal was filed on 15 July 2003. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☒ The proposed amendment(s) will not be entered because:
- (a) ☒ they raise new issues that would require further consideration and/or search (see NOTE below);
  - (b) ☐ they raise the issue of new matter (see Note below);
  - (c) ☒ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
  - (d) ☒ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: see advisory action attachment.

3. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.
4. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: see advisory action attachment.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☒ will not be entered or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: \_\_\_\_\_.

Claim(s) objected to: \_\_\_\_\_.

Claim(s) rejected: 1 and 3-8.

Claim(s) withdrawn from consideration: \_\_\_\_\_.

8. ☐ The proposed drawing correction filed on \_\_\_\_\_ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_.
10. ☐ Other: \_\_\_\_\_

Art Unit: 1733

## advisory action attachment

new issues

The new issues include: (1) in claim 1, adding "the inclination angles  $\theta_1$ ,  $\theta_2$ ,  $\theta_3$ ,  $\theta_4$ , and  $\theta_6$  of the center lines of said outside connecting grooves and said at least one inside connecting groove are gradually decreased from the outside tread edge to the inside tread edge" and "angles differences  $\theta_1 - \theta_2$ ,  $\theta_2 - \theta_3$ ,  $\theta_3 - \theta_4$  are not less than 5 degrees"; (2) in claim 1, adding "the inclination angles  $\theta_1$ ,  $\theta_2$ ,  $\theta_3$ ,  $\theta_4$ , and  $\theta_6$  of the center lines of said outside connecting grooves and said at least one inside connecting groove are gradually decreased from the outside tread edge to the inside tread edge" without canceling claim 4; (3) presenting claim 4 without a period; (4) in claim 8, adding "the inclination angles  $\theta_1$ ,  $\theta_2$ ,  $\theta_3$ ,  $\theta_4$ , and  $\theta_6$  of the center lines of said outside connecting grooves and said at least one inside connecting groove are gradually decreased from the outside tread edge to the inside tread edge"; (5) the limitation of "the outside lateral grooves of the left tire and the outside lateral grooves of the right tire are inclined in the same direction" in new claim 9, (6) the limitation of "the groove center lines X0 of the outside lateral grooves are straight" in new claims 10 and 11; (7) the limitation of "the first groove center line X1 is straight, the second groove center line X2 is a cranked line, the third groove center line X3 is a cranked line; and the fourth groove center line X4 is straight" in new claim 12; and (8) the groove center lines X5 is a cranked line, and the groove center line X6 is straight" in new claim 13. The remaining changes do not raise new issues.

Art Unit: 1733

remarks

With respect to the 35 USC 112 first paragraph, the 35 USC 112 first paragraph rejection of claims 1, 3 and 6-8 stands for the reasons given in the last office action. It is again noted that the new matter rejection (112 first paragraph rejection) of claims 1 and 8 may be overcome by incorporating claim 4 into claim 1 and claim 8. The 112 first paragraph rejection against claims 6 and 7 would be withdrawn if claims 6 and 7 are amended as shown on page 4 of the response filed 7-15-03. An after final amendment, which amends claims 6 and 7 as shown on page 4 of the response filed 7-15-03 and does not raise new issues, would be entered. The 35 USC 112 first paragraph rejection of claim 5 is withdrawn.

Applicant comments and the examiner agrees that the examiner relies on Europe '464, which is the earlier work of the present inventor, to show the basic tire tread arrangement. The examiner adds that Europe '464 is available as prior art under 35 USC 102(b).

Applicant argues that the limitation of  $\theta$  being 40-60 degrees for the outside lateral grooves is not shown by Europe '464. The examiner disagrees since Europe '464 suggests using an angle of  $\theta$  of 60 degrees (which falls within the claimed range of 40-60 degrees) for the **outside lateral grooves**. Europe '464's range of 60-80 degrees for angle  $\theta$  overlaps the claimed range of 40-60 degrees (an angle of 60 degrees falls within Europe '464's range of 60-80 degrees and the claimed range of 40-60 degrees). Furthermore, Tsuda suggests using an angle within the claimed range of 40-60 degrees for the lateral grooves of Europe '464's asymmetric tread for off road

Art Unit: 1733

use by teaching inclining lateral grooves at an angle  $\theta_a$  of 30-75 degrees in order to avoid embedding the groove with mud in off road use.

Applicant argues that the limitation of  $\theta_5$  for the inside lateral grooves being 70-100 degrees is different than the teaching Europe '464 of an angle of 80-110 degrees. This argument is not persuasive since Europe '464's angle range of 80-110 degrees for the **inside lateral grooves** substantially overlaps the claimed range of 70-100 degrees. Angles of 80-100 degrees fall within both of Europe '464's angle range of 80-110 degrees and the claimed range of 70-100 degrees. Hence, Europe '464 provides ample suggestion to incline the inside lateral grooves at an angle (e.g. 80-100 degrees) within the claimed range of 70-100 degrees.

As to the connecting grooves, applicant argues that claim 1 states that the range of angles for  $\theta_1$ ,  $\theta_2$ ,  $\theta_3$ ,  $\theta_4$  is 20-50 degrees whereas Europe '464 shows this range to be 15-45 degrees. This argument is not persuasive since Europe '464's teaching to incline a **connecting groove** at an angle within the range of 15-45 degrees fairly suggests inclining the connecting groove at an angle within the range of 20-50 degrees. Europe '464's range of 15-45 degrees substantially overlaps the claimed range of 20-50 degrees.

Applicant argues that Europe '464 does not show that the inclination angles of  $\theta_1$  -  $\theta_4$  for the connecting grooves are different. More properly, Europe '464, like applicant, teaches arranging connecting grooves in an asymmetric tread and suggests inclining a **connecting groove** at the inside of the tread at an angle that is different from the angle of a **connecting groove** at the outside of the tread. In particular,

Art Unit: 1733

Europe '464 teaches inclining an outside connecting groove at an angle of 15-45 degrees and inclining an inside connecting groove at an angle such as 10 degrees. The description of the angles  $\theta_1$ ,  $\theta_2$ ,  $\theta_3$ ,  $\theta_4$  and  $\theta_6$  gradually decreasing from the outside tread edge to the inside tread edge requires angle  $\theta_6 < \theta_1$ . Europe '464 expressly discloses the subject matter of  $\theta_6 < \theta_1$  by teaching an angle  $\delta$  for example of 10 degrees and a different angle  $\gamma$  of for example 45 degrees. Furthermore, applicant acknowledges that Tsuda teaches connecting grooves inclined at different angles. See page 12 lines 17-18 of response filed 7-15-03. Tsuda, which like Europe '464 discloses an asymmetric tread for off road use, motivates one of ordinary skill in the art to incline connecting grooves differently to improve cornering stability and noise reduction for off road or snow conditions. The use of differently inclined connecting grooves is consistent with Europe '464's teaching to incline an outside connecting groove at an angle of 15-45 degrees which is different than an angle of inclination such as 10 degrees for an inside connecting groove.

Applicant argues that while Tsuda shows a difference in angles of inclination, this is in conjunction with a main slant groove which is curved rather than straight. Using such an arrangement of different auxiliary slant grooves (connecting grooves) would produce a different effect with a straight main groove rather than a curved one. This argument is not persuasive. First: This argument is not commensurate in scope with claims 1 and 8 since these claims fail to require straight outside lateral grooves. Second: There is no evidence of record showing "Using such an arrangement of different auxiliary slant grooves would produce a different effect with a straight main

Art Unit: 1733

groove rather than a curved one". Third: Both Europe '464 and Tsuda teach that the lateral grooves may be curved. At page 3 lines 49-50, Europe '464 teaches using curved outside axial grooves 3 (curved lateral grooves) as an alternative to straight axial grooves 3 (straight lateral grooves).

Applicant argues that the claimed range of 40-60 degrees for angle  $\theta_0$  would not have been obvious since had this been obvious the present inventor who is the inventor of the present invention would have seen it at the time. This argument is not persuasive since (1) Europe '464, as noted above, suggests 60 degrees which falls within the claimed range of 40-60 degrees and (2) the issue is whether or not the claimed invention would have been obvious to one of ordinary skill in the art instead of whether or not the claimed invention would have been obvious to the present inventor. Applicant emphasizes that Tsuda et al's teaching of 30-75 degrees is for curved main slant grooves (curved lateral grooves). Claims 1 and 8 fail to exclude curved lateral grooves. Furthermore, Tsuda's teaching to incline lateral grooves at an angle  $\theta_a$  of 30-75 degrees for an asymmetric off road tread in order to avoid embedding the groove with mud in off road use, fairly suggests that (1) 60 degrees is not a lower limit for the angle of inclination for lateral grooves of an asymmetric tread for off road use and (2) Europe '464's lateral grooves for an asymmetric tread for off road use can and should have an angle of inclination within the claimed range of 40-60 degrees.

As to angle difference not less than 5 degrees, applicant notes that at col. 4

Art Unit: 1733


line 24 of Tsuda, the difference between the two listed angles is 5 degrees. In response, the examiner notes that Tsuda is not limited to a difference in angles of 5 degrees and (2) 5 degrees falls within the scope of not less than 5 degrees.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is 703-308-2068. The examiner can normally be reached on Mon. - Fri. 7:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Ball can be reached on (703) 308-2058. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Steven D. Maki  
July 30, 2003

  
STEVEN D. MAKI 7-30-03  
PRIMARY EXAMINER  
~~GROUP 1300~~  
Av 1733